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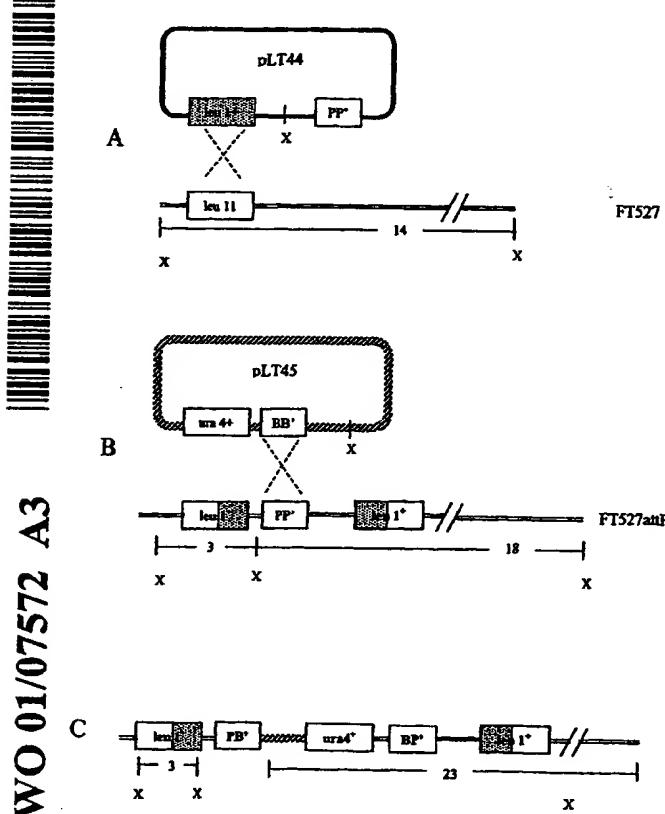
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(54) Title: DNA RECOMBINATION IN EUKARYOTIC CELLS BY THE BACTERIOPHAGE PHIC31 RECOMBINATION SYSTEM



(57) Abstract: This invention provides methods for obtaining specific and stable integration of nucleic acids into eukaryotic cells. The invention makes use of site-specific recombination systems that use prokaryotic recombinase polypeptides, such as the Φ C31 integrase, that can mediate recombination between the recombination sites, but not between hybrid recombination sites that are formed upon the recombination. Thus, the recombination is irreversible in the absence of additional factors. Eukaryotic cells that contain the recombinase polypeptides, or genes that encode the recombinases, are also provided.



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INTERNATIONAL SEARCH REPORT

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PCT/US 00/19983A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12N5/10 C12N15/79 C12N15/90 //C12N9/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, CHEM ABS Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X A	<p>WO 00 11155 A (UNIV LELAND STANFORD JUNIOR) 2 March 2000 (2000-03-02) page 4 page 5, line 25 -page 6, line 2</p> <p>THORPE, H. M. ET AL.: "In vitro site-specific integration of bacteriophage DNA catalyzed by a recombinase of the resolvase/invertase family" PNAS, vol. 95, 1998, pages 5505-5510, XP002157128 cited in the application abstract</p> <p>---</p> <p>-/-</p>	<p>1-8, 10-47</p> <p>1-47</p>

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 18222 A (ALONSO JUAN C ;ROJO FERNANDO (ES); BERNARD ANTONIO (ES); DIAZ VICE) 15 April 1999 (1999-04-15) page 14, paragraph 2	1-47

INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0011155	A	02-03-2000	AU	5898599 A		14-03-2000
WO 9918222	A	15-04-1999	AU EP	9466898 A 1021550 A		27-04-1999 26-07-2000